Using community health workers to screen at bars and other alcohol based venues is a useful way to detect active Tuberculosis cases, especially for hard-to-reach populations in rural South Africa

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Where can we find active TB? Case finding at shebeens (community sites and alcohol based venues) in rural South Africa

Intro:
- Community-based intensive case finding (CBICF) is an effective strategy for infectious disease case detection, particularly for hard-to-reach populations
- Alcohol use is a risk factor for tuberculosis
- We report on CBICF targeting shebeens (alcohol based venues (ABV)) in a rural resource limited setting for active tuberculosis

Methods:
- Setting: rural KwaZuluNatal, South Africa
- Community health workers in mobile clinic van stationed outside ABVs and community centers conducted health education and voluntary confidential screening including the following:
  - WHO TB symptom screen: ≥1 symptom received a sputum collection for GeneXpert. ≥2 symptoms were brought to the community hospital for CXR, second sputum samples, and clinical evaluation
  - HIV (rapid point of care test)
  - Diabetes (random glucose elevated >7mmol/L)
  - Hypertension (elevated blood pressures of >140/>90mmHg)
  - Alcohol Use Disorder Identification Test (AUDIT) (Hazardous alcohol use ≥8for men, ≥6for women).

- Community members with positive results were referred to their primary care clinic.
- **Active TB cases: pos GeneXpert (n= 3) and clinical evaluation with correlation with CXR (n=2)**

Results:
- Number Needed to Screen = 288
- Median AUDIT score among TB cases was 13 (10.5-17.5) compared to non-TB cases 4 (11-45) (p=0.04)

Figure A: A community health worker exits the mobile clinic van parked outside of a local shebeen to ask the owner for permission to screen on premises. Shebeens are common local ABVs in South Africa
Figure B: A community health worker with a study participant in the mobile clinic van

Table 1. Characteristics of the Study Population (n=1438)	
	n (%)
Screened at ABV	1309 (91.2)
Median Age (IQR)	30 (22-46)
Male Gender	1039 (72.3)
Electricity	1322 (92.0)
Employment	373 (25.9)
Access to running water	423 (29.4)
Hazardous alcohol use	620 (43.1)
Tobacco use	565 (39.3)
Cannabis use	200 (13.9)
Active TB case	5 (0.35)

Table 2. Risk factors for TB case (n=5)			
Category	TB pos Case N (%)	TB neg Case N (%)	P Val
Age Median (IQR)	50 (41-58)	30 (22-45)	0.03
Tobacco use	4 (80.0)	561 (39.2)	0.06
Hazardous AUDIT Score	5 (100)	615 (43.1)	0.01
Total Audit Score Median (IQR)	13 (10.5-17.5)	4 (11-45)	0.04

Conclusions:
- CBICF is a useful way to detect people with active TB, especially for hard-to-reach rural populations
- Focusing screening efforts among those at ABVs is high yield and can be a useful adjunctive strategy for TB case finding efforts
- There is a strong need for comprehensive alcohol reduction and addiction services to assist those at high risk for TB acquisition